

Resolution 20-2R2

**OPTICAL COMMUNICATIONS**

The SFCG,

CONSIDERING

- a) that optical communication has been demonstrated on Earth-to-space, space-to-Earth and space-to-space paths;
- b) that further optical communication technology demonstrations and operational missions are currently planned by several SFCG member agencies;
- c) that optical communication is being considered for space communication in near-earth and deep space environments;
- d) that the optical spectrum is of use to scientific and industrial purposes other than communication;
- e) that use and sharing of the optical spectrum has not been thoroughly studied within the International Telecommunication Union Radiocommunication Sector (ITU-R);
- f) that the ITU-R has approved Questions ITU-R 228/3 (propagation), ITU-R 264/4 (fixed-satellite and inter-satellite services), and ITU-R 235/7 (space science) addressing spectrum above 275 GHz without an upper frequency limit and ITU-R 228/1 (spectrum management) addressing the possibility and relevance of including in the Radio Regulations frequency bands above 3000 GHz;
- g) that the Radio Regulations currently do not include definitions or nomenclature with respect to optical communication links;
- h) that Resolution **86** (Rev. Marrakesh, 2002) of the Plenipotentiary Conference instructed World Radiocommunication Conference (WRC) 2003 and subsequent WRCs to review and update the advance publication, coordination, notification and recording procedures to ensure that these procedures, characteristics and appendices reflect the latest technologies;
- i) that Resolution **118** (Marrakesh, 2002) of the Plenipotentiary Conference resolves that WRCs can include in agendas for future conferences, items relevant to spectrum regulation of frequencies above 3 000 GHz and take any appropriate measures, including revision of the relevant parts of the Radio Regulations;
- j) that WRC 2003 adopted Resolution **950** (Geneva, 2003), which provides a precedent for the inclusion of details on systems which are not in allocated bands (i.e., 275 to 3000 GHz) in the Master International Frequency Register,

## RESOLVES

1. that SFCG member agencies that are developing or are considering the use of optical communication systems are encouraged to contribute to the ITU-R studies;
2. that the characteristics of Member agency optical communications systems be maintained in a SFCG database;
3. that based on the experience gained from Resolves 2, SFCG members provide relevant technical data to the ITU-R;
4. that the SFCG, through IUCAF, bring to the attention of the International Astronomical Union (IAU) the proliferation of space-based optical communication technology.